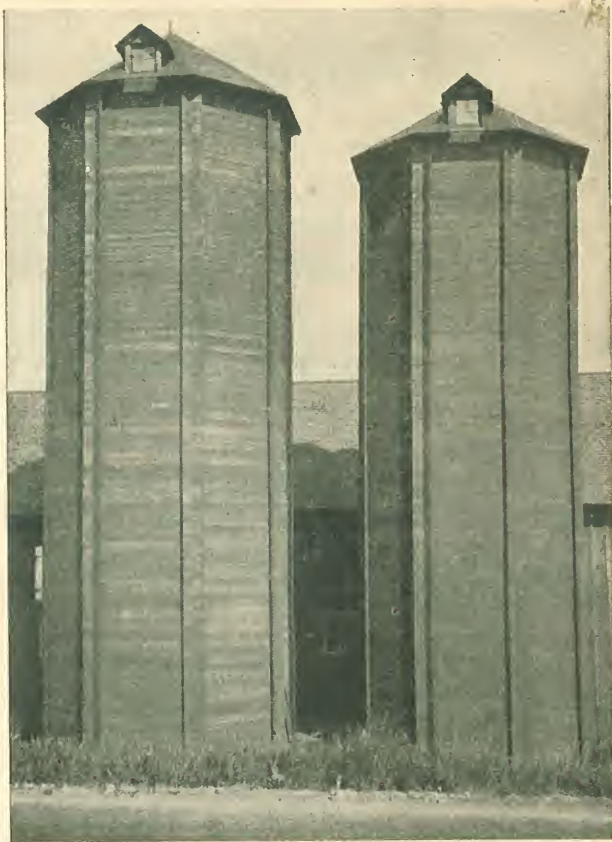


"A SILO ON EVERY FARM"

# THE SILO SOLUTION

All Wood - No Hoops - No Nails - No Attention - Self-Adjusting



14 x 40

12 x 36

Built in 1918—Present condition excellent

**SILOCTA**  
PRODUCTS  
LTD

INCORPORATING HOARD CO. SILO DEPT  
VICTORIA B.C.

OFFICE, NO. 7 ANDREWS HOTEL, MINNEAPOLIS, MINN.

SILOCTO PRODUCTS, LTD.

## GUARANTEE!

Our customers are assured the benefit of our years of experiment and research to produce the best silo value obtainable.

Our product has undergone exacting tests by Government Departments over a period of years of actual use, in which our silo gave the best results ever obtained in competition with well known types of silos; and has been awarded medals by internationally known judges of highest standing in the dairy field.

All this guarantees that you are investing in a proven product.

In addition, we guarantee every piece as to quality and manufacture and extend to our customers the benefit of our research and service departments and of our policy of fair dealing.

*Why Spend A Life-Time Learning What's On This Page  
Reading Time Of This Page Is 45 Seconds  
Try It — It Will Pay You.*

*Advantages—WOOD versus other types of silos.*

1. *NO SERIOUS FREEZING—(insulation value of 2 inches of wood equals 21 inches of concrete.)*
2. *No deterioration from silage acid (Acid affects concrete and mortar but has no effect on Douglas Fir.)*
3. *No poor quality silage from chilling next walls.*
4. *First cost less.*
5. *We consider any type of wooden silo superior to silos of other material.*

*Advantages of OUR SILO versus other wood silos.*

1. *Patent construction gives stability to single wall silo retaining advantages over double wall with respect to dry rot.*
2. *No painting or creosoting necessary.*
3. *Low first cost with best obtainable material.*
4. *Quickly and cheaply erected, hence a good tenant farm proposition.*
5. *Easily taken down for removal if desired.*
6. *Eliminates all objectionable features while retaining all advantages of wood type.*

*By all means buy a WOODEN silo, and if you wish the best type obtainable purchase OURS. Trademarked name is "Siloctogon."*





Felling the Douglas Fir

## The Silo Solution

Silocto Products, Ltd., incorporating Hoard Company Silo Department, paid up Capital, \$100,000—Dominion of Canada Charter—was formed for the purpose of enlarging the sales and manufacture of our patent construction covering silos and other structures.

A number of years ago we started investigations in the silo field with a view to finding the very best type.

First we found that it was generally conceded that a WOOD silo preserves the proper temperature necessary to make good silage, better than one of other material.

We also found that numerous types had been designed, with view of overcoming the only difficulty, namely, the change in dimension of wood, due to moisture variations.

We found that as to the body of the silo in most makes, despite expensive fittings, it was necessary for the owner to give continuous attention to loosening and tightening the hoops in order to prevent the collapse of the silo.

In other types an attempt was made by fastening and nailing to prevent free expansion and contraction of the wood.

This feature also applies to nearly all of the patent doors, some being heavily bolted in an attempt to hold the wood in place.

Also many silos had expensive door fittings and fancy hinges.

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**WHEN YOU THINK OF SILO—THINK OF SILOCTO**

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We know that the average farmer has barn doors, which are used a dozen times daily, with ordinary strap hinges, and decided against paying a large sum for hinges which would be used just once per year.

Eventually, after three years investigation, we decided upon this silo which is covered by:

United States Patent No. 1,314,531, date, September 2nd, 1919

United States Patent No. 1,567,595, date, December 29th, 1925

New Zealand Patent No. 47,205, date, February 1st, 1922

Canadian Patent No. 232,213, date, June 26th, 1923

Great Britain Patent No. 190,410, date, December 21st, 1922

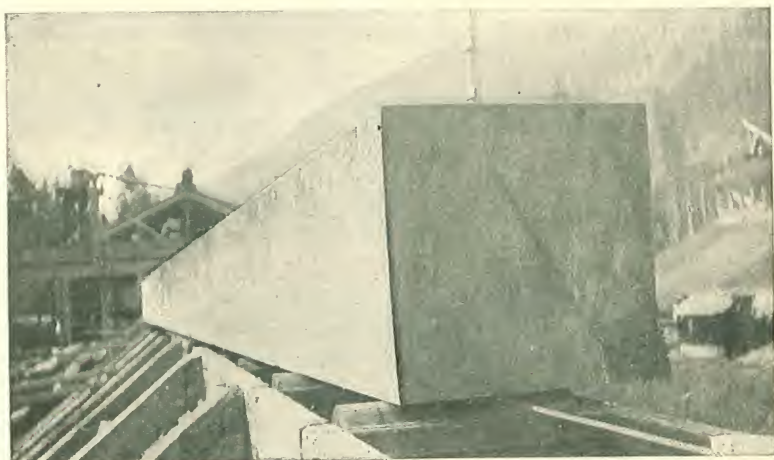
Great Britain Patent No. 231,328, date, April 7th, 1924

Our silo is built entirely of wood—Clear Douglas Fir—so interlocked as to allow free compensation for the natural changes due to moisture variation.

We were immediately impressed with the correctness of the construction of this silo from a mechanical engineering standpoint.

A personal inspection was made, covering a considerable number in actual use, and interviews with satisfied owners further convinced us.

We received letters from owners residing in the States of Washington, Oregon, Idaho and California, further confirming our conclusions.



A Stick 35 in. x 35 in.—82 feet long at the Mill

In fact, we found that the factory supply had never been able to keep up with the local demand.

We are now manufacturing in sufficient quantities to supply a portion of Eastern requirements in addition to taking care of Western business.

Yours truly,  
SILOCTO PRODUCTS, LTD.



Pond full of unsawn Silo Stock

## What a Silo Should Be

SCIENTIFIC STUDY of the "silo problem" reveals several fundamental requirements which must be met, if a silo is to be a complete success:

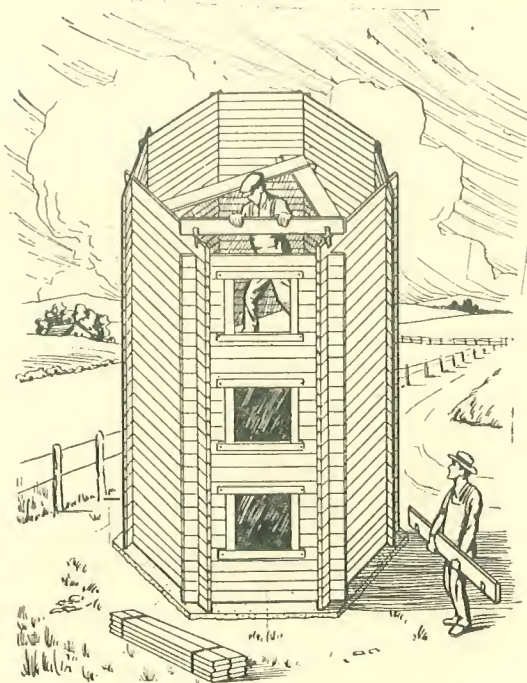
1. The silo in operation must be practically air-tight.
2. The interior walls must not only be smooth, they must be straight from top to bottom as the bore of a gun, so that the material packed inside may settle without the disturbance of the contents from the least irregularity of the side walls.
3. In view of the second requirement, the construction should be such that expansion and contraction, swelling and shrinking can take place without materially changing the diameter and circumference of the silo.
4. It should be so constructed that it will take care of itself, will require no attention in the way of frequent adjustment in the way of hoops, bolts, etc.



5. In order to make it a practical part of farm equipment for lands worked under lease, it should be so constructed that it could be easily taken down and moved, if desired, at the expiration of a lease.
6. It should be so constructed that it may be put up easily and correctly without skilled labor and without the expense of extra and purely temporary construction, such as elaborate scaffolding.

Read over the above requirements carefully—then study carefully the construction of **Our Silo** NOT A CRIB SILO. No nails to be pulled by swelling, thus producing air leaks. NO UPRIGHTS to prevent vertical movement. Courses can never become separated. You will find that we have solved the silo problem by building one in strict accordance with scientifically correct principles.

This silo is built practically without driving a nail, simply by putting together the 2 x 6 timbers which are delivered to you, sawed



OUR SILO IS WOOD — OUR SILO IS GOOD

to our special shapes under U. S. Patent No. 1,314,531, under date of Sept. 2, 1919, and subsequent patents.

These timbers are cut at an angle of 45 degrees, so that eight of these 2 x 6 timbers make an octagonal wall six inches high\*. The timber is "surfaced on four sides," tongued and grooved—so that this wall can be carried to any height desired, with an absolutely smooth interior surface from top to bottom, just as straight and true as the bore of a gun.

## High Grade Material Used

Our silos are made of highest grade material. We use only the best of clear old growth yellow fir—no knots—knots are objectionable. A board with knots on edges will not dress smoothly or knots may fall out, in either case causing an air leak; also the burred wood around knots will make a rough interior.

A board with large knots will not shrink and swell uniformly, thus making an imperfect fit of edges. Acids in ensilage have a tendency to eat out pitch around knots.

Clear timber has the greatest possible strength.

## Easiest Silo to Build

THIS SIMPLICITY of construction not only gives the best and strongest silo, when erected, but the building of one is so easy that, with a true and level foundation to start from, even boys can build it. For the construction of a stave silo it is necessary to build up scaffolding surrounding it outside, which must of course include all the diagonal and other bracing needed to make it safe for men to work on. As our silo goes up in the air, it can be erected without any scaffolding whatever, simply by laying scaffold planks across the silo itself, moving them around as the walls are laid up, but as this necessitates stooping down all the time while laying the timbers, time is really saved by nailing to the inner wall one inch boards across four sections of the silo at desired intervals, on which are placed scaffold

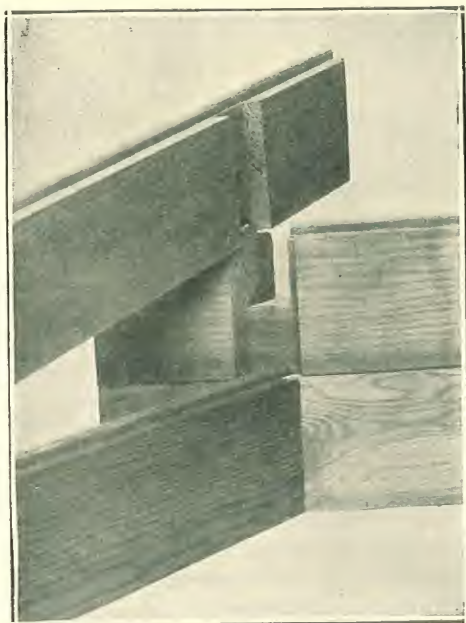
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\* For simplicity we refer to these 2 x 6 timbers as though they actually measured 2 inches by 6 inches. After being surfaced four sides and tongued and grooved, they actually are  $1\frac{5}{8}$  x  $5\frac{1}{4}$  inch face.

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boards on which to walk, and two sets of these boards is all that is needed, as they can be moved up as the silo gets higher. By this method you can always keep your work above you to best advantage; no heavy or long timbers at all used.



Detail of our patented corner construction  
(Note flat angle permitting packing of silage)

## Build Our Silo as a Fill-in Job

In building our silo you are not obliged to finish it in one day. Each six inches (one ring around the silo) is just as solid as the completed silo.

Build it during spare time, when you have nothing else to do.

It is so simple in construction and easily built you will find you get lots of enjoyment in erecting it.

There is no danger leaving it unfinished for a period of time.

Judge for yourself how much you will save on account of not having to build scaffolding and not having to pay a high priced carpenter.

## Saves Time and Money

From experience under all kinds of conditions, we have no hesitancy in making the statement that you can build our silo with the same time and labor necessary to build **ONLY THE SCAFFOLDING** for a stave silo. We are **DONE** in the time it takes the other fellow to **GET READY**.

## Build the Same Silo Higher

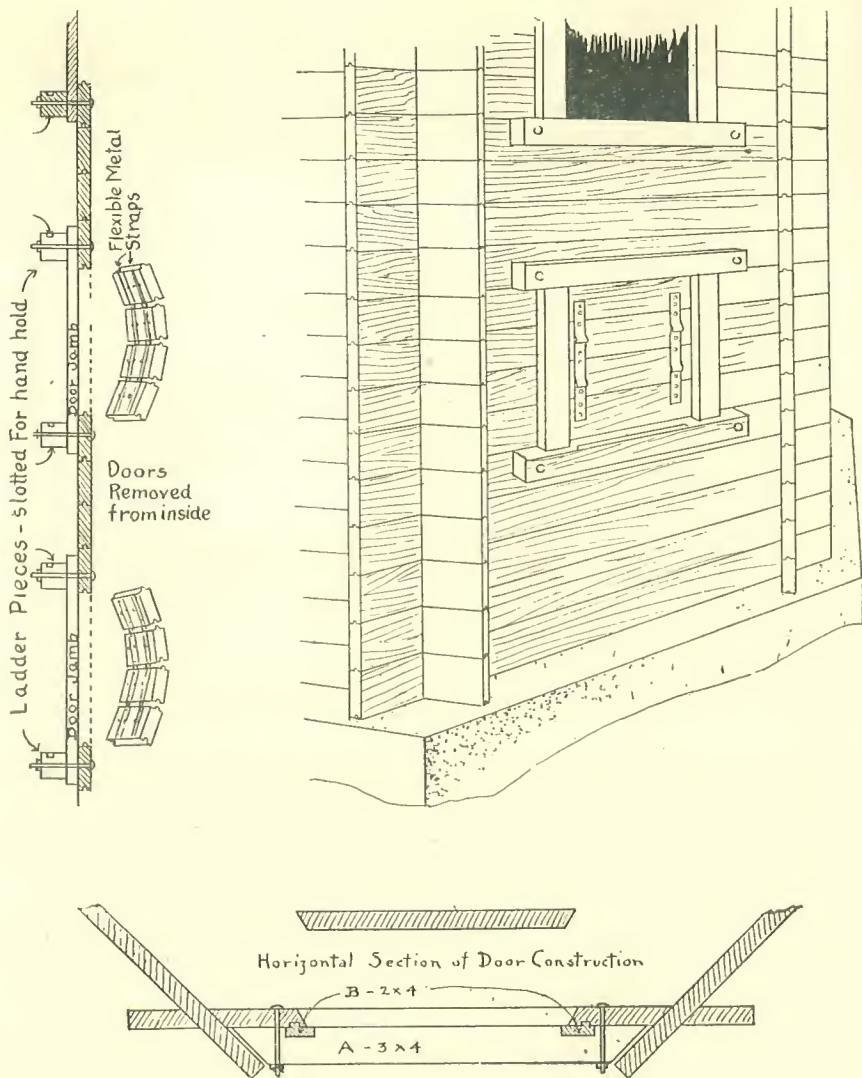
Also, after you have built one of our silos, if you find it not high enough for your needs, or find it too high, you can lower it by taking off as many rows of timbers as you please, or you can get from us at any time additional timbers that will fit right on, and you can increase its height at any time as much as you wish.

## Swells and Shrinks Without Disturbing the Contents

That this form of construction is not only the simplest and the easiest to build, but that it makes a silo that "does the work" best, can be readily understood by all experienced in handling silos.

Everyone knows that the expansion and contraction, the swelling and shrinkage of wood, when alternately wet and dry, affects the width, not the length, of the timbers. With vertical staves the swelling and shrinking is the cause of lots of trouble—and there is no trouble so aggravating as trouble you didn't expect. Hoops and bolts require constant attention, and the changes in the actual inside diameter of stave silos are often much greater than is realized.

In our silo, with the timbers laid horizontally, the swelling and shrinking means merely that the silo grows a little taller when wet. As it dries out, it comes down, its own weight keeping all joints tight, wet or dry. Being built entirely of wood, there is no strain of one part against another in swelling and shrinking, for the timbers all act together in perfect harmony. This vertical action in swelling and shrinking does not in the least change the perfectly straight and smooth inside diameter, allowing the contents to pack solidly in a constantly uniform space, consequently bringing the very best results.



Any inequalities or variations in the "bore" of a silo are practically certain to mean the penetration of air to the contents, with the possibility of a heartbreaking discovery of "mould" or other spoilage of what you had counted on for a winter's feed.

BUY OUR SILO AND WEAR A SMILE



## Our Door

The door construction regularly takes the space of two feet in every three feet of silo height—one foot of regular octagonal construction between each door, giving the strength and rigidity which is so important for reasons already explained, and which also insures the long life of this form of silo.

Our door construction is patented as well as the silo.

The fact that the silo walls are free to expand or contract, and that walls and doors are made of exactly the same material, enables us to use the utmost simplicity of door construction.

Some types of silos require a heavy door for the purpose of resisting the tremendous strains set up by the swelling of the lumber under the hoops.

Our doors are only required to take care of the lateral pressure due to contents.

You will notice from the illustration and cross section that the door facings and jambs, like every other portion of our silo and doors, is absolutely free to expand or contract with moisture variations.

At the same time every individual member is so interlocked as to maintain a smooth interior surface and an absolutely tight joint.

Our door (U. S. Patent No. 1,314,531 Sept. 2, 1919. Great Britain Patent No. 190,410 Dec. 21, 1922. Canadian Patent No. 232,213, June 26, 1923. New Zealand Patent No. 47,205, Feb. 1, 1922) consists of four pieces of 2 x 6 tongued and grooved on tops and bottoms and beveled to fit against side bevel, held together with expansion strips which are used only to hold pieces together when removing door. Doors are 22 inches wide and 2 feet high, and are put on from the inside of silo; simply bend entire door—expansion strips allowing this by acting as hinges—put tongue in at top in corresponding groove in wall piece overhead and bottom door groove over tongue in wall piece at bottom and spring door in flush with silo wall, against bevel and jambs, as a head goes in a barrel. To remove, simply reverse process.

It is advisable to replace each door as removed in next space above; hang up top door when removed and finally replace in bottom door space of silo.

## Ladder

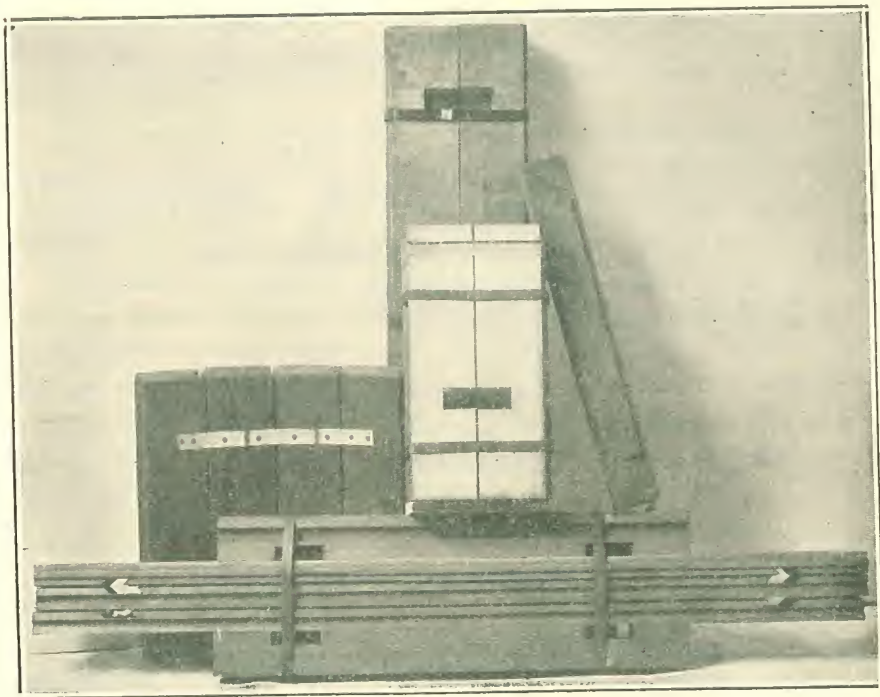
The 3 x 4 door facings serve as a ladder, being grooved to provide hand hold. These are bolted on to side pieces at factory.

Thus our silo comes to you completely built—all you have to do is provide a level foundation—we will furnish plans, and simply put the pieces together like a child's blocks—no holes to bore, no hoops to bind and fasten.

We can also supply roof, chute, and anchors if desired.

## No Painting

Douglas Fir for silo use requires no painting or creosoting to improve durability. You may use a stain paint outside for appearance if desired. Do not use lead paint or do not treat corner joint or tongue and groove.



This photograph shows how silo stock comes to you. All ready cut and neatly bundled separately. Side pieces—door sides—doors—jambs—and ladder pieces.

Moisture should have free access when filling to tighten and make air tight, and should be free to evaporate when empty allowing joints to shrink, thus providing free air circulation.

Douglas Fir will not be attacked by dry rot when wet, nor when dry, if accessible to air.

Our silo comes to you, the parts bundled separately, as in the above picture, wall and doors complete, but without roof or chute.

## We Furnish

A blue print foundation plan with each order, also instructions for erecting.

## We Can Supply in Addition

A ready cut roof complete and neatly bundled. Purchaser to supply shingles or roofing material.

A ready cut and bundled chute.

A set of anchors complete.

**OUR ROOF**—ready cut and bundled, consists of:

8—2x6 rafters

8—2x4 intermediate rafters

16—2-in. spacing boards, beveled to fit slope of roof

8 panels of ready cut  $\frac{3}{4}$ -in. sheathing

1 center piece for butting rafters.

**OUR CHUTE**—ready cut and bundled, consists of:

4—2x4 corners

3 walls cut and bundled  $\frac{3}{4}$ -in. stock.

**OUR ANCHORS**—

We can supply a complete set of anchors as desired.

Our patented construction provides for natural shrinkage and swelling of walls. Experience enables us to adjust this detail just as it should be. Moisture is always present while a silo is filled; when it is empty it may get dried out thoroughly. Slight variations in shrinkage then are unimportant, for there is nothing in the silo to be

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**WOOD SILOS ARE BEST BY TEST**

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affected, and the timber that shrinks the most will swell the most again just as soon as the silo is filled and the silo will again be as tight as a drum; and, as a matter of fact, we find by experience that the variations are so little that the weight of the structure itself is sufficient to keep it tight at all times.

Our silo frequently is used for a water tower. Tanks of considerable size can be placed on top of our silos with perfect safety and the cost of building a water tower saved, besides gaining the convenience of having water right at the top of the silo whenever you may want it.

In emptying our silo, do not be thoughtless of the doors. Arrange so that you can hang the top door in a convenient way at the top of the silo as soon as you take it out. Then, when you remove the door below, place it immediately in the top door opening, and as you work down, repeat this—each door being placed in the vacant opening just above where it was. Our doors and openings are all uniform, so that any door will fit into any opening.

This attention to your doors may be a moment's trouble at the time, but experience will show you that this little systematic handling of your doors will be a time-saver as well as a trouble-saver in the long run.

You will be surprised to know how willing your local banker will be to loan you money with which to buy a silo, because he knows there would be much more money for banks to handle if every farm had one or more silos.

The best evidence of satisfaction given would be to give you the names of a few people who have purchased the second or more of our silos after using one the previous year.

## **Silo a Necessity on All Farms**

You would not think of cutting your grain by hand as it would be too expensive, neither should you think of feeding stock without a silo—it would be too expensive. All the agricultural experts agree that a silo will pay for itself within a short time. How can you afford to be without one?

## Erect Your Silo and Forget It

After your silo is built, you can forget it, as there are no hoops to tighten, no damage from expansion or contraction. As all woods expand and contract in width, the ordinary hoop silo must be taken care of and the hoops loosened or tightened according to the dryness of the wood. To forget this may mean the loss of your silo. Our silo expands in height only and without any attention on your part.

## A Request

We are covering a very large territory. It is impossible to forecast our annual volume of sales. Consequently every year we have a few delayed orders which we are unable to fill.

Therefore, if you have received this catalog by mail, place your order at once with nearest branch office or home office.

If our representative has called give him your order on first call as he may not find time to come again. This may enable him to find time to call when you are putting up your silo thus assuring you expert service even though our instructions for erection and foundation plans are so plain that you can hardly go wrong in building silo yourself.

Our stock in neat small bundles can be put away in hay mow or any vacant space. You will have it ready when wanted, and will be sure of not being disappointed. Place your order now and do yourself and ourselves a favor.

## Silo Storage

Comparative space required for one ton of feed:

Silo - -  50 Cubic Feet

Hay Mow  521 Cubic Feet

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*FATTEN YOUR CATTLE AND YOUR BANK ROLL*

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## Expert Opinions re Silos

The opinion of a well-known authority, the Kansas Board of Agriculture, describes its merits:

"A silo is for one purpose—the making and curing of silage. For a score of years the wood silo has demonstrated its reliability in this particular.

"It has long been understood that the ACTION OF THE ACIDS IN THE SILAGE IS A WOOD PRESERVATIVE, WHEREAS ON THE CONTRARY, THESE ACIDS CAUSE DISINTEGRATION OF MASONRY OR CONCRETE STRUCTURES.

No bleach works or dyeing and finishing works can use iron or concrete in their souring or acid process. The material used in the construction of their vats or retainers is Douglas Fir or Pitch Pine

"WOOD IS A NON-CONDUCTOR OF HEAT AND COLD, WHICH IS THE BASIC REASON FOR THE INCREASING DEMAND FOR WOOD SILOS. THE FERMENTATION IN SILOS, ACCORDING TO RECOGNIZED AUTHORITIES, IS PERFECTLY OBTAINABLE ONLY WHEN A CONSIDERABLE DEGREE OF HEAT EXISTS. ANY MATERIAL (MASONRY, CONCRETE OR METAL) USED IN A SILO WALL THAT TENDS TO ABSORB THIS HEAT RETARDS THE FERMENTATION AND DEPRECIATES THE VALUE OF THE SILAGE. MOREOVER, THE ABSORPTION OF MOISTURE FROM THE SILAGE AFFECTS THE QUALITY.

"As an absorbing agent, and as a conductor of heat and cold, a comparison of the wooden silo with that of mineral construction is wholly in favor of wood."

## Stability

On account of the extreme height in proportion to size of base in a silo unusual difficulties are encountered in securing stability.

Early wood single wall types violated structural principles and were noticeably defective as to stability. Attempts to remedy this by multiple walls, etc., secured stability but violated another law, to wit—free circulation of air. Such circulation is essential in preventing dry rot under moist atmospheric conditions.



Consequently during the past few years other types than wood have found favor with nothing to recommend them but stability, and in spite of many other disadvantages. It has been found that due to acid corrosion this stability was not permanent.

We have solved the problem with a single wall wood silo designed along correct structural lines insuring stability.

Siloco silos in Great Britain, Canada, and the United States have established an enviable record in withstanding storm conditions. The majority of our customers, particularly on the Pacific Coast and in Canada have not used anchors. Their silos have stood under sixty mile gales. We have, however, in all cases recommended anchors.

In early types of single wall silos the sliding of tongues and grooves with consequent assistance from the weight of the structure toward collapsing was the usual cause of failure. The interlocking feature of our silo overcomes this fault. The entire weight of our silo must be lifted several feet before its weight will assist in overturning it, also the anchors would have to be broken.

Another defect due to structural design in early types was bulging sides due to swelling of wood confined by hoops. We allow free movement during the process of shrinking and swelling in a vertical direction, thus maintaining perfect balance and making impossible failure on account of bulging sides.

#### READ THIS LETTER:

Major Foster of Park View, Cumbermere, White, Salop, England, writes as follows:

"Re wind load on silo. Everyone appears to be very anxious re this matter. Our silo is now nearly empty. It has lately had heavy gales on it, and I have been up in the roof during such gales. I can safely say, that if the silo is properly built, there is nothing to fear. I have been up in the roof of our silo at 10 o'clock on a dark night, when it was nearly empty, in a 60-70 mile an hour gale, with rain and snow, and there was less rock than I have noticed in high belfries on the continent of Europe that I have been on in fine weather, and as you know ours is 45 feet high to the eaves."

Note:—Anchors were used on this silo.

Relative Durability (Resistance to Decay) of Untreated Woods.  
Durability of Commercial White Oak Taken as 100 Per Cent.

CONIFERS

|                                |        |                            |        |
|--------------------------------|--------|----------------------------|--------|
| *Douglas Fir (dense).....      | 75-100 | Pine, pitch, sugar.....    | 45- 55 |
| Douglas Fir (ave. millrun).... | 75- 85 | Pine, western white .....  | 65- 80 |
| Fir (the true firs).....       | 25- 35 | Pine, western yellow, pond |        |
| Larch, western .....           | 75- 85 | loblolly, lodgepole .....  | 35- 50 |
| Pine, Jack .....               | 35- 45 | Spruce, Englemann, red     |        |
| Pine, Norway .....             | 45- 60 | Sitka, white .....         | 35- 50 |

\* Silocto Silos are made from this quality of Douglas Fir.

HARDWOODS

|                              |         |                            |        |
|------------------------------|---------|----------------------------|--------|
| Ash .....                    | 40- 55  | Oaks, red oak group.....   | 48- 50 |
| Beech .....                  | 40- 50  | Oaks, white oak group..... | 100    |
| Birch .....                  | 45- 50  | Poplar, yellow .....       | 40- 50 |
| Chestnut .....               | 100-120 | Sycamore .....             | 35- 45 |
| Elm, cork (rock), slippery.. | 65- 76  | Willow .....               | 30- 40 |
| Elm, white .....             | 50- 79  |                            |        |

Issued by U. S. Forest Products Laboratory,  
Madison, Wisconsin, 1922.

## Decay

As you will note, Douglas Fir, the material used in our silos, stands at the top of the soft wood list.

In dry structures fir wood once thoroughly dry and painted to prevent access of moisture will last indefinitely.

Also fir wood continuously submerged under water will not decay.

Dry rot, the usual form of decay is a parasitic fungus growth which reduces the wood fibre to a mass of dry dust. Under favorable conditions it spreads with great rapidity and may destroy entire structures in a few months. It requires a warm, moist, stagnant atmosphere. Such a condition may obtain when free access of air is not allowed.

Remember fir wood entirely saturated or thoroughly dry will not decay. When filled, the inside of our silo wall is saturated, dry rot cannot exist. The outside wall has free access to air, likewise unsuitable for dry rot. As the silo is emptied the wood dries out, our joints shrink and become loose, allowing free circulation of air. This again prevents decay.

Accumulations of dirt promote dry rot. Keep our silo walls and base clean and you will be assured of many years' service.

## Silos

From 100 on the American Continent in 1882 to 535,000 in 1928.  
All authorities agree—

### *The U. S. Dept. of Agriculture* *Your Agricultural College* *Your Experiment Stations*

That the Silo is a farm necessity, and will pay for itself in one or two years.

The number of WOOD SILOS in use exceeds all other makes put together.

### Here's What Users Say:

F. B. Ingals, Oregon, purchased one 10'x30' and one 12'x30' in the fall of 1917, and in 1918 purchased a third, 12'x36', and erected it as he filled it, building it from the ensilage as it filled up, using no scaffolding whatever. He fed part of his herd silage in the winter of 1917-1918 and balance of herd were fed without silage. He turned them on the range together and at the round-up in the fall he could pick out the silage fed cattle.

D. Burns, British Columbia, writes: "With reference to your silos—we find them very satisfactory. They swell when filled and shrink back when emptied and dried out, without any expense, which is a great improvement on the old-fashioned stave silo. At the present time we are using three of your silos on our Delta Ranch and hope to purchase more from time to time as we get our ranch fitted for the feeding of cattle. You are at liberty to refer any prospective purchaser to us for a recommendation, as we consider they are the best silos on the market."

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*WOOD SILOS ARE BEST BY TEST*

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R. J. Hotchkiss, British Columbia, writes: "In reply to your inquiry about the silo I got from you last fall. I have found it very satisfactory and a great improvement on the ordinary stave silo, as you know I have had a 2x6 stave silo for several years. We cannot keep it air tight and it has gone out of shape. I took your advice and built it as I filled it. I put up about 10 feet and filled that, then put up another 6 or 8 feet, and so on. The actual time it took to put up the 26 feet was about 6 hours, while it took 3 men 3 days to put up my old stave silo. I like the doors on your silo; they are as strong as any other part and perfectly air tight. We did not put any guy lines on as we do not get very bad winds here. I intend raising my silo to 35 feet this next fall. I use a mixture of corn and sunflowers which I find to be better feed than either corn or sunflowers alone. We have just used the last of the ensilage and it kept fine. We did not find any spoiled ensilage and the corners were just as good as any of it. I put on a light roof in two sections which can be taken off when filling so as to be able to tramp the ensilage even when full to the top. I expect to see a number of your silos go up here next fall and I feel sure that you will do a big business as soon as your silo gets better known, as I consider it the most perfect wooden silo I have ever seen."

R. T. Riley, Manitoba, writes: "Concerning the two silos that I erected last year. I filled them with fodder corn, cut fine and well tramped down. I commenced feeding this as soon as the cattle were put in, and as this was a fine open fall, this was not until the first week in November. The first silo was emptied without being frozen; the second silo was half emptied before there was any serious inconvenience from the frost, and for the last ten feet it was frozen solid about one foot in, but eventually this was all fed out without any loss. When we first started feeding, some of the cattle scoured a little, but they soon got used to it and they did well on it, and I am fully satisfied with the results."

W. L. Parrish, Manitoba writes: "I am in receipt of your favor and enclose you herewith photo of my buildings at Parkdale where you will see one of your silos stands out very prominently. We have had good success with the two silos which I purchased from you both with the corn and sunflower and no more frost than in the usual silos, and if I was building further silos I do not know of any that would suit me better than these which I purchased from you."

Your name Lemack Post Office Address Leeburg  
 Nearest Railway Station Springfield, Ore.  
 When did you purchase your silo May 1919  
 What size is it 10 x 30  
 Has it given you entire satisfaction yes indeed  
 Do you consider it stronger than a stave silo yes indeed  
 What did it cost you to erect \$3.00  
 Did you build it yourself some  
 Did you put in anchors and guy lines no  
 Did you put a roof on it yes What kind shingles  
 If you needed another silo would you purchase another similar  
 (silo) yes by all means  
 Remarks If I could get it, and if  
you make them handy  
write and get in touch  
with M E Mack  
632 E and 28,  
Albany  
Ore.

MAY 16 Rec'd

The Minister of Agriculture for Saskatchewan saw Mr. Parrish's silos, and after investigation purchased two 16'x30' silos in 1925. In 1928 they sent us an unsolicited order for a third 16'x30' silo with order for lumber to make up carload.

Oscar Youngdahl, Minnesota, writes: "Silo is entirely satisfactory, better than stave silo—2 men put it up in one day. The silage is in fine shape although we put it in rather green."

Emil Fredlund, Minnesota, writes: "I have a concrete silo and expect to use the one I bought from you for summer feeding. I

decided on the Hoard Silo on account of the ease of erecting, and if I should want more room or a larger silo I can build on top of this one."

F. E. Root, Wisconsin, writes: "Silo has given entire satisfaction, better than stave or concrete—the boys put it up working at odd times. The condition of the silage is good, everything O.K."

B. Pedersen, Minnesota, writes: "I consider it better than a stave, tile or concrete silo. Two days' labor, 2 men put up a 14'x30' silo with anchors and roof. I find the silage in very good condition. I am pleased with the silo."

Wm. M. McCready, Minnesota, writes: "Entirely satisfactory—cost about \$8.00 to erect. The silage has kept fine in mine, with no bad spots in it and no frost to speak of, for this cold winter. The silos around here are mostly concrete and stave, and they sure froze up bad, compared with mine."

G. Christiansen, Minnesota, writes: "My silo is entirely satisfactory, far better than tile or concrete silo, cost nothing to build. I had a hired man and him and I put it up in one day. Silage is in fine condition, couldn't be better."

Foreign Customers—a large number of our silos are in use in England, Ireland, Scotland and Wales.

Kilmarnock Dairy Farm, probably the best known Agricultural College in the British Isles, purchased one of our silos in 1922. We are advised that this has proven entirely satisfactory.

We were awarded medals at Dublin and Belfast; The Royal Welsh Medal and Wembley—to the best of our knowledge, ours is the only silo to be awarded these medals.



## SIZE OF SILO TO BUILD

A common mistake is building silos too large in diameter. A cow or steer will consume from 30 to 40 pounds of silage per day. The average feeding-period in Minnesota is about 200 days. If an animal is fed 40 pounds of silage per day for 200 days it will consume 4 tons of silage. Bearing these figures in mind, it is easy to adjust the capacity to the size of the herd kept. It is better to build a silo reasonably high than to try to get the desired capacity by building it large in diameter. The same amount of storage capacity can be secured more cheaply in a silo of large diameter, but loss results from inability to keep the silage fresh while feeding.

TABLE I. APPROXIMATE CAPACITY OF ROUND SILOS  
(After King)

| Height<br>of<br>Silo | Mean Wght.<br>of Silage<br>Per Cu. Ft. | Diameter in Feet |      |      |      |      |      |      |
|----------------------|--|------------------|------|------|------|------|------|------|
|                      |  | 8                | 10   | 12   | 14   | 16   | 18   | 20   |
| Feet                 | Pounds                                 | Tons             | Tons | Tons | Tons | Tons | Tons | Tons |
| 20                   | 33.3                                   | 17               | 26   | 38   | 51   | 67   | 85   | 105  |
| 22                   | 34.6                                   | 19               | 30   | 43   | 59   | 77   | 97   | 120  |
| 24                   | 35.9                                   | 22               | 34   | 49   | 67   | 86   | 110  | 136  |
| 26                   | 37.2                                   | 24               | 38   | 55   | 75   | 97   | 123  | 152  |
| 28                   | 38.4                                   | 27               | 42   | 61   | 83   | 109  | 137  | 169  |
| 30                   | 39.6                                   | 30               | 47   | 67   | 91   | 119  | 151  | 187  |
| 32                   | 40.7                                   | 33               | 51   | 74   | 100  | 131  | 166  | 205  |
| 34                   | 41.8                                   | 36               | 56   | 80   | 109  | 143  | 181  | 224  |
| 36                   | 42.8                                   | 39               | 61   | 87   | 118  | 155  | 196  | 243  |
| 38                   | 43.8                                   | 41               | 65   | 94   | 128  | 167  | 212  | 262  |
| 40                   | 44.8                                   | 45               | 70   | 101  | 138  | 180  | 228  | 282  |
| 42                   | 45.7                                   | 48               | 75   | 109  | 148  | 193  | 244  | 301  |
| 44                   | 46.7                                   | 51               | 80   | 116  | 159  | 207  | 261  | 323  |
| 46                   | 47.3                                   | 54               | 85   | 123  | 168  | 219  | 277  | 341  |
| 48                   | 48.0                                   | 58               | 90   | 130  | 177  | 231  | 293  | 361  |
| 50                   | 48.8                                   | 62               | 95   | 138  | 188  | 245  | 310  | 383  |

Silage is always fed from the top of the silo; and if the top is left untouched for several days, the silage will spoil. Spoiling, of course, is much more rapid in warm weather than in cold. The silo should not be so large in diameter but that an inch and a half or two inches can be fed from the top each day. A silo 10 feet in diameter has about 78 square feet of floor space; so that it would have at all times that amount of surface exposed at the top. An inch and a half taken off the top of a 10-foot silo would amount to 10 cubic feet. A cubic foot of silage weighs about 40 pounds; so the least number of cattle that one could feed from a silo 10 feet in diameter, without waste, would be ten head, fed at the rate of 40 pounds per day.

A silo 30 feet deep is 360 inches deep, and if silage is used at the rate of 2 inches per day, it would furnish feed for 180 days.

TABLE II. WEIGHT OF SILAGE PER INCH OF DEPTH

| Diam. of Silo | Area of Silage | Depth 1 in.* | Depth 2 ins.* | Depth 3 ins.* |
|---------------|----------------|--------------|---------------|---------------|
| Feet          | Square Feet    | Pounds       | Pounds        | Pounds        |
| 12            | 113            | 376          | 752           | 1,128         |
| 13            | 133            | 440          | 880           | 1,320         |
| 14            | 154            | 512          | 1,024         | 1,536         |
| 15            | 177            | 590          | 1,180         | 1,770         |
| 16            | 201            | 670          | 1,340         | 2,010         |
| 17            | 227            | 756          | 1,512         | 2,268         |
| 18            | 254            | 846          | 1,692         | 2,538         |
| 20            | 314            | 1,046        | 2,092         | 3,138         |

\* Forty pounds per cubic foot.

WISE TO BUILD REASONABLY HIGH

It is perfectly safe in almost any location to build a silo from 35 to 40 feet high or more. Cement or brick silos may safely be built 50 feet high. It is the part of wisdom to build reasonably high, and only large enough in diameter to give the capacity needed for feeding. If silage is to be used in summer, it will be necessary to figure on feeding at least 3 inches off the surface each day. At this rate a 10-foot silo will supply ample silage for 20 head of stock.

TABLE III. CATTLE FED PER INCH OF DEPTH

| Diameter of Silo | When fed 30 Lbs. Each per Day |          |          | When fed 40 Lbs. Each per Day |          |          |
|------------------|-------------------------------|----------|----------|-------------------------------|----------|----------|
|                  | 1 inch                        | 2 inches | 3 inches | 1 inch                        | 2 inches | 3 inches |
| Feet             | Cattle                        | Cattle   | Cattle   | Cattle                        | Cattle   | Cattle   |
| 12               | 12.5                          | 25.0     | 37.6     | 9.4                           | 18.8     | 28.2     |
| 13               | 14.6                          | 29.3     | 44.0     | 11.0                          | 22.0     | 33.0     |
| 14               | 17.0                          | 34.1     | 51.2     | 12.8                          | 25.6     | 38.4     |
| 15               | 19.6                          | 39.3     | 59.0     | 14.7                          | 29.5     | 44.2     |
| 16               | 22.3                          | 44.6     | 67.0     | 16.7                          | 33.5     | 50.2     |
| 17               | 25.2                          | 50.4     | 75.6     | 18.9                          | 37.8     | 56.7     |
| 18               | 28.2                          | 56.4     | 84.6     | 21.1                          | 42.3     | 63.4     |
| 20               | 34.8                          | 69.7     | 104.6    | 26.1                          | 52.3     | 78.4     |

It is more practicable on most farms to have two silos 12 feet in diameter than to have one silo 16 or 18 feet in diameter, because those smaller in diameter allow more economical feeding.

## What a Silo will do for the Cattle Feeder

The silo is equally as valuable to the cattle feeder as it is to the dairyman. Exhaustive tests have been made by the Purdue University, at Lafayette, Indiana, and some of the results are shown below. The test was made eight different years, each lot containing ten steers that were fed for an average period of 158 days.

TABLE 2. COMPARISON OF RESULTS FROM RATION OF  
SHELLED CORN, COTTONSEED MEAL AND CLOVER HAY  
With Results from a Ration including Corn Silage Twice Daily in Addition

| RATION                                    | Shelled Corn,<br>Cottonseed Meal,<br>Clover Hay | Shelled Corn,<br>Cottonseed Meal,<br>Clover Hay,<br>Corn Silage |
|---|---|---|
| Average Initial Weight.....               | 984.1 Lbs.                                      | 983.3 Lbs.  |
| Average Final Weight.....                 | 1359.9 "  | 1360.1 "  |
| Average Daily Gain.....                   | 2.38 "  | 2.38 "  |
| Average Daily Feed Consumed—              |   |   |
| Shelled Corn .....                        | 16.80 "   | 13.31 "   |
| Cottonseed Meal .....                     | 2.80 "  | 2.82 "  |
| Clover Hay .....                          | 11.56 "   | 3.19 "  |
| Corn Silage .....                         | .....   | 27.43 "   |
| Cost per 100 Lbs. Gain.....               | \$12.64   | \$11.17   |
| Selling Value in Lots.....                | 8.30  | 8.35  |
| Profit per Steer (not including Pork).... | .83   | 6.90  |
| Profit per Steer (including Pork).....    | 8.85  | 15.24   |

The average prices of feeds while this series of trials was in progress were: Corn, 59 cents per bushel; Cottonseed Meal, \$32.78 per ton; Clover Hay, \$13.27 per ton; and Corn Silage, \$4.23 per ton.

On this basis, one ton of corn silage replaced 4.61 bushels of corn and 613 pounds of clover hay in the feed required to produce a given amount of gain.

—Bulletin No. 235, Purdue University, Lafayette, Ind.

According to the foregoing statements the cattle feeder without a silo cannot compete with his neighbor who uses a silo.

A silo means economical

Use of lands.

Production of milk.

Production of beef.

Feeding.

WHEN YOU THINK OF SILO—THINK OF SILOCTO



PROFESSOR A. L. HAECKER, a foremost authority on silage matters, arrives at the following conclusion:

From averages of 20 feeding tests carried on in different experimental stations in different years.

SAVINGS in production—silage vs. no silage

|                 |                     |
|-----------------|---------------------|
| Beef .....      | \$1.22 per 100 lbs. |
| Milk .....      | .40 " " "           |
| Butterfat ..... | .10 " lb.           |

Carrying over young stock—30% of feed bill.

Thus suppose you have an average small herd producing 2,000 lbs. of butterfat per yer, A SILO WILL SAVE YOU \$200.00 PER YEAR. You have been paying for a silo every two years.

Why not have one?

## Vitamines

Professor Haecker also says: "Corn silage contains vitamins which are essential elements in the growth and development of the animal body. This is one of the secrets of the success of the silo."

## Place Your Order Early

The technical departments of several national organizations interested in the silo field, upon the outstanding and revolutionary advantages of our design being brought to their attention, have decided to feature same.

The territory covered is so large that we do not expect, for some time, to be able to expand our manufacturing and sales organization to give complete service.

Let us again remind you of the importance of placing your order at once. Your order placed now for future delivery at your convenience, also giving earliest and latest possible date of delivery acceptable, will not only insure your obtaining your silo, but will help us to use the time thus gained in giving proper attention to your friends and neighbors and our other customers.

We can assure you that your courtesy will be greatly appreciated.

## A Letter for You Sir

Dear Reader:

Here are a number of facts about our silo that we would like to bring to your attention.

YOU DO NOT HAVE TO BOARD A SPECIAL CREW TO ERECT OUR SILO AS TWO MEN CAN PUT IT UP IN ONE DAY. THE COST OF ERECTING SHOULD NOT EXCEED \$10.00. SKILLED LABOR IS NOT REQUIRED. YOU CAN BUILD IT YOURSELF IN SPARE TIME, USING EIGHT CLEATS AND EIGHT TWELVE-FOOT BOARDS FOR INSIDE SCAFFOLDING, OR BETTER TWO LADDERS AND THREE BOARDS RUN FROM THE RUNGS OF THE LADDERS TO THE CORRESPONDING DOOR OPENING, OR YOU CAN BUILD WHEN FILLING WITHOUT ANY SCAFFOLDING.

One great advantage with our silo is that you can always add a few feet to the height in case you require more accommodation. Any additional quantity is sold at the same price per foot in height throughout.

BY SHIPPING IN CARLOAD LOTS OR MIXED CARS OF SILOS AND LUMBER WE ARE ENABLED TO SAVE YOU AN APPROXIMATE AVERAGE OF \$50.00 OR MORE IN FREIGHT CHARGES. DO NOT THINK THAT YOU HAVE TO BUY THE WHOLE CARLOAD. THAT IS SIMPLY TO TAKE CARE OF YOUR NEIGHBORS' ORDERS, TOO.

When you buy our silos you are spending your money for a silo and not for a fair sized hardware shop. In doing this you do not sacrifice stability and long lasting qualities. These are taken care of in our patented construction.

We give an absolute guarantee on the lumber and will replace any defective pieces free of charge and without argument. To date we have never been called upon to carry out this statement.

We maintain a department to give advice on the subject of silage in general. To this end we keep in touch with the latest developments of experimental farms and agricultural colleges.

WRITE US FOR PRICES. YOU WILL RECEIVE A PLEASANT SURPRISE. WHEN WE SELL A DOLLARS' WORTH OF SILO WE SELL A DOLLARS' WORTH OF SATISFACTION.

An early order is your best guarantee of a satisfactory delivery.

Very cordially yours,

SILOCTO PRODUCTS, LTD.

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**OUR SILO IS WOOD — OUR SILO IS GOOD**

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*Why Spend A Life-Time Learning What's On This Page  
Reading Time Of This Page Is 45 Seconds  
Try It — It Will Pay You.*

*Advantages—WOOD versus other types of silos.*

1. *NO SERIOUS FREEZING—(insulation value of 2 inches of wood equals 21 inches of concrete.)*
2. *No deterioration from silage acid (Acid affects concrete and mortar but has no effect on Douglas Fir.)*
3. *No poor quality silage from chilling next walls.*
4. *First cost less.*
5. *We consider any type of wooden silo superior to silos of other material.*

*Advantages of OUR SILO versus other wood silos.*

1. *Patent construction gives stability to single wall silo retaining advantages over double wall with respect to dry rot.*
2. *No painting or creosoting necessary.*
3. *Low first cost with best obtainable material.*
4. *Quickly and cheaply erected, hence a good tenant farm proposition.*
5. *Easily taken down for removal if desired.*
6. *Eliminates all objectionable features while retaining all advantages of wood type.*

*By all means buy a WOODEN silo, and if you wish the best type obtainable purchase OURS. Trademarked name is "Siloctogon."*



## A POOR BUSINESS PROPOSITION

If this is a picture of how you spend your winters it will pay you to look across at your neighbor on the next page. What he saves with a silo, you lose without one.



## A GOOD BUSINESS PROPOSITION

You can figure that a silo will save you about \$200.00 per year. At this rate it won't take long to pay for itself. Over a period of twenty years it will net \$4,000.00—Spend it how you like. Here are some suggestions.



BUY OUR SILO AND WEAR A SMILE





Medal awarded by The Royal Welsh Agricultural Society for our silo, 1925. (Wales)



Medal awarded by the Royal Ulster Agricultural Society for our silo in 1923. (Ireland)



Medal awarded by the Royal Dublin Society for our silo in 1923. (Ireland)



Medal awarded by the British Empire Exhibition for our silo, 1925. (Great Britain)



Medal awarded by the British Empire Exhibition for our silo in 1924. (Great Britain)

**SILOCTA**  
P R O D U C T S  
L T D  
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TRUTH IN ADVERTISING — OUR PRACTICE

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